

Under the Paperwork Reduction Act of 1995, no persons required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>		<b>Complete if Known</b>			
		Application Number	10/632,099		
		Filing Date	August 1, 2003		
		First Named Inventor	Richard O. Chen		
		Art Unit	1631		
		Examiner Name	Larry D. Riggs II		
Sheet	1	of	5	Attorney Docket Number	27763-705.501

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)				
	1.	US	2001/0049671 A1	12/06/2001	Joerg	
	2.	US	2002/0165737 A1	11/07/2002	Mahran	
	3.	US	2002/0194201 A1	12/19/2002	Wilbanks et al.	
	4.	US	2003/0018522 A1	01/23/2003	Denimarck et al.	
	5.	US	2004/0220969 A1	11/04/2004	Cho et al.	
	6.	US	2004/0236740 A1	11/25/2004	Cho et al.	
	7.	US	2005/0044071 A1	02/24/2005	Cho et al.	
	8.	US	2005/0055347 A9	03/10/2005	Cho et al.	
	9.	US	2006/0064037 A1	03/23/2006	Shalon et al.	
	10.	US	2006/0143082 A1	06/29/2006	Ebert	
	11.	US	2007/0282632 A1	12/06/2007	Sachs	
	12.	US	2008/0033819 A1	02/07/2008	Leschly	
	13.	US	2008/0255877 A1	10/16/2008	Fernandez	
	14.	US	2010/0010957 A1	01/14/2010	Cho et al.	
	15.	US	5,317,507	05/31/1994	Gallant	
	16.	US	5,371,807	12/06/1994	Register et al.	
	17.	US	5,377,103	12/27/1994	Lamberti et al.	
	18.	US	5,418,971	05/23/1995	Carison	
	19.	US	5,625,721	04/29/1997	Lopresti et al.	
	20.	US	5,794,050	08/11/1998	Dahlgren et al.	
	21.	US	5,963,966	10/05/1999	Mitchell et al.	
	22.	US	5,976,842	11/02/1999	Wurst	
	23.	US	6,023,659	02/08/2000	Seilhamer et al.	
	24.	US	6,038,560	03/14/2000	Wical	
	25.	US	6,052,714	04/18/2000	Miike et al.	
	26.	US	6,067,548	05/23/2000	Cheng	
	27.	US	6,101,488	08/08/2000	Hayashi et al.	
	28.	US	6,115,640	09/05/2000	Tarumi	

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application forms to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO 9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/632,099
				Filing Date	August 1, 2003
				First Named Inventor	Richard O. Chen
				Art Unit	1631
				Examiner Name	Larry D. Riggs II
Sheet	2	of	5	Attorney Docket Number	27763-705.501

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	29.	US 6,154,737	11/28/2000	Inaba et al.	
	30.	US 6,226,377	05/01/2001	Donaghue	
	31.	US 6,236,987	05/22/2001	Horowitz et al.	
	32.	US 6,263,335	07/17/2001	Paik et al.	
	33.	US 6,292,796	09/18/2001	Drucker et al.	
	34.	US 6,308,170	10/23/2001	Balaban	
	35.	US 6,345,235	02/05/2002	Edgecombe et al.	
	36.	US 6,370,542	04/09/2002	Kenyon	
	37.	US 6,424,980	07/23/2002	Iizuka et al.	
	38.	US 6,442,566	08/27/2002	Atman et al.	
	39.	US 6,470,277	10/22/2002	Chin et al.	
	40.	US 6,487,545	11/26/2002	Wical	
	41.	US 6,498,795	12/24/2002	Zhang et al.	
	42.	US 6,554,705	04/29/2003	Cumbers	
	43.	US 6,598,043	07/22/2003	Baclawski	
	44.	US 6,741,976	05/25/2004	Tuzhilin	
	45.	US 6,904,423	06/07/2005	Nicolaou et al.	
	46.	US 7,022,905	04/04/2006	Hinman et al.	

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/632,099
				Filing Date	August 1, 2003
				First Named Inventor	Richard O. Chen
				Art Unit	1631
				Examiner Name	Larry D. Riggs II
Sheet	3	of	5	Attorney Docket Number	27763-705.501

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	† <sup>2</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				
	47.	GB 2350712 A	12/06/2000	Hashimoto et al.		
	48.	JP 11-259498 (in Japanese with English abstract)	09/24/1999	Hashimoto et al.		
	49.	JP 2001-134600 (in Japanese with English abstract)	05/18/2001	Yamada		

Continued on the next page with more references.

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST-3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST-16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Substitute for form 1449/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/632,099
				Filing Date	August 1, 2003
				First Named Inventor	Richard O. Chen
				Art Unit	1631
				Examiner Name	Larry D. Riggs II
Sheet	4	of	5	Attorney Docket Number	27763-705.501

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	50.	BLASCHKE, C., et al. 1999. Automatic extraction of biological information from scientific text: protein-protein interactions. Proc Int Conf Intell Syst Mol Biol. 60-7.	
	51.	Business Week. GM finally has a real winner. But success is bringing a fresh batch of problem. McGraw-Hill Co. Inc. August 17, 1992.	
	52.	CHAKKOUR, et al. Sentence Analysis by Case-Based Reasoning. The Fourteenth International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems IEA/AIE 2070. 2001; 546-551.	
	53.	CHAUDHRI, et al. 1998. OKBC: A programmatic foundation for knowledge base interoperability. In Proceedings of the 1998 National Conference on Artificial Intelligence.	
	54.	FARQUHAR, et al. May 14, 1997. The ontolinguas server: a tool for collaborative ontology construction. Stanford University. Pages 1-22.	
	55.	HAFNER, et al. Ontological Foundations for Biology Knowledge Models. 4th International Conference. on Intelligent Systems for Molecular Biology, Jun. 12-15, 1996 at Washington University in St. Louis, Missouri.	
	56.	HALPIN, T. Object-role modeling (ORM/NIAM). Handbook on Architectures of Information Systems. Ch. 4. 1998.	
	57.	International search report dated 1/10/2003 for PCT Application No. US02/35650.	
	58.	International search report dated 7/22/2004 for PCT Application No. US03/03006.	
	59.	International search report 8/27/2008 for PCT Application No. US2007/74663.	
	60.	KARP, et al. 2000. HinCyc: A knowledge base of the complete genome and metabolic pathways of H. influenzae. Proc Int Conf Intell Syst Mol Biol. 4: 116-24.	
	61.	NewsWire Association Inc. On-line Tests Give Instant Feedback on Office Skills. February 14, 1998.	
	62.	NOY, et al. The knowledge model of protege 2000: Combining interoperability and flexibility. Springer. 2000; 17-32.	

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a checkmark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-786-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO <b>INFORMATION DISCLOSURE          STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/632,099
				Filing Date	August 1, 2003
				First Named Inventor	Richard O. Chen
				Art Unit	1631
				Examiner Name	Larry D. Riggs II
Sheet	5	of	5	Attorney Docket Number	27763-705.501

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	63.	RINDFLESCH, et al. Extracting molecular binding relationships from biomedical text. Presented May 2, 2000 at the Sixth Applied Natural Language Processing Conference from 4/29/00-5/4/00 in Seattle, Washington.	
	64.	RZHETSKY, et al. A knowledge model for analysis and simulation of regulatory networks. Bioinformatics. 2000 Dec;16(12):1120-8.	
	65.	SEKIMIZU, et al. 1998. Identifying the Interaction Between Genes and Gene Products Based on Frequently Seen Verbs in Medline Abstracts. Genome Inform Ser Workshop Genome Inform. 9: 62-71.	
	66.	Supplementary European Search Report dated 9/21/2007 re Appln. No. 02778752.2	
	67.	THOMAS, et al. 2000. Automatic Extraction of Protein Interactions from Scientific Abstracts. Pacific Symposium on Bioinformatics. 541-52.	

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a checkmark here if English language Translation is attached.  
 This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.